BASENNOVA

PRODUCT DATA SHEET

Aluminum Anode for Harbor/Marine Engineering Facilities

Aluminum Anode for Harbor/Marine Engineering Facilities (Al–Zn–In series sacrificial anode): In electrolytes such as seawater and sea mud, aluminum exhibits a more negative potential, forming a galvanic couple with the protected steel structures (wharf steel piles, jacket structures, mooring systems, trestles, caissons/revetment steel components, etc.). The aluminum anode preferentially corrodes and dissolves, continuously delivering protective current to polarize the steel surface into a safe potential range (for steel, typically controlled at ≤ –0.80 to –0.85 V vs Ag/AgCl), thereby suppressing uniform and localized corrosion. They are mostly installed as large-size trapezoidal blocks, bracelet anodes, or combined units via welded steel legs or clamps, designed for long service life. The splash zone generally still relies primarily on coatings, while the anodes focus on protecting the fully submerged zone and the seabed interface.

KEY FEATURES

1.Highest current output per unit weight
2.Lightweight, ideal for large marine structures
3.Moderate driving voltage, safer operation
4.Relatively controllable cost, suitable for mass production of large castings
5.Stable potential in seawater and brine

APPLICATIONS

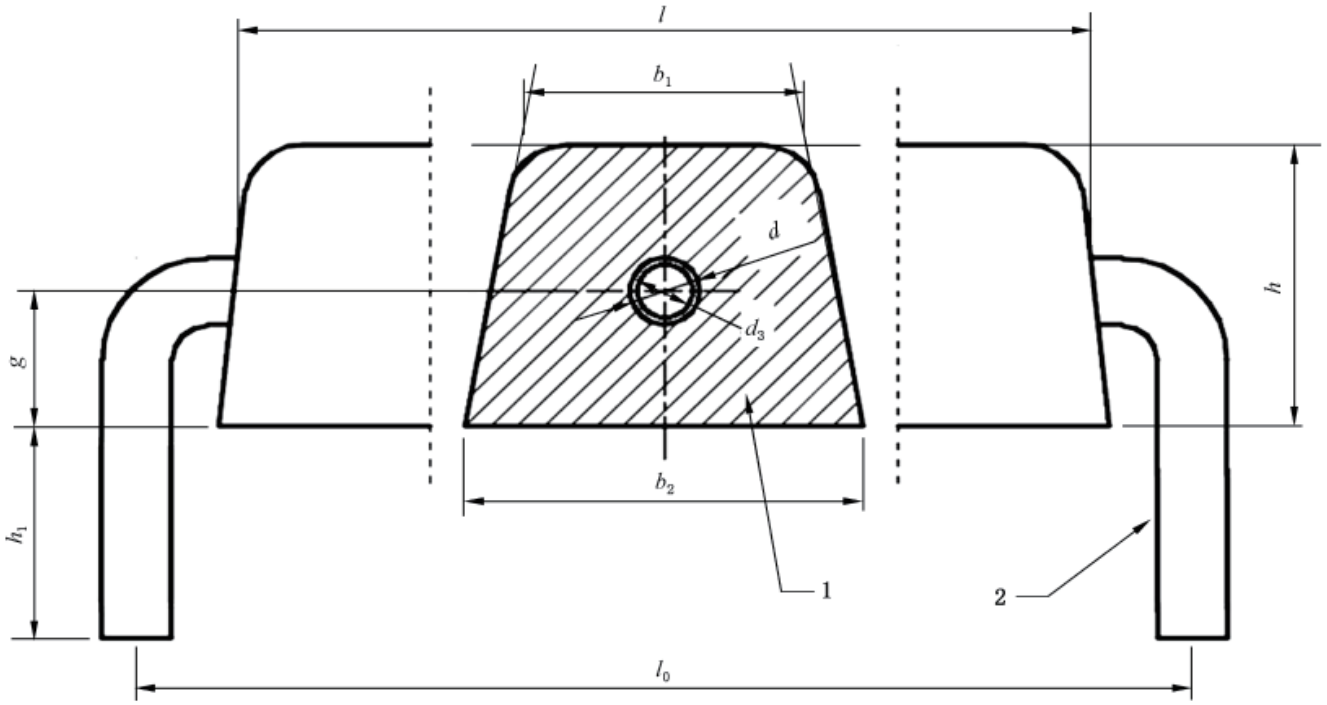
1.wharf steel piles
2.acket structures
3.mooring systems
4.trestles
5.caissons/revetment steel components

PRODUCT SPECIFICATIONS

Chemical Composition(%)			
Executive Standard	**DNV RP B401**	**GB/T4948-2025:A21**	**BS EN12496-2013: A3**
Zn	2.5-5.75	4.0-7.0	4.75-5.75
In	0.015-0.040	0.020-0.050	0.016-0.020
Cd	≤0.002	/	≤0.002
Si	≤0.12	≤0.10	0.08-0.12
Cu	≤0.003	≤0.01	≤0.003
Fe	≤0.09	≤0.15	≤0.06
Mg	/	0.50-1.50	/
Ti	/	0.01-0.08	/
Other	≤0.10	/	/
Each Impurity	/	/	≤0.02
Total Impurity	/	/	≤0.05
Al	Remainder	Remainder	Remainder

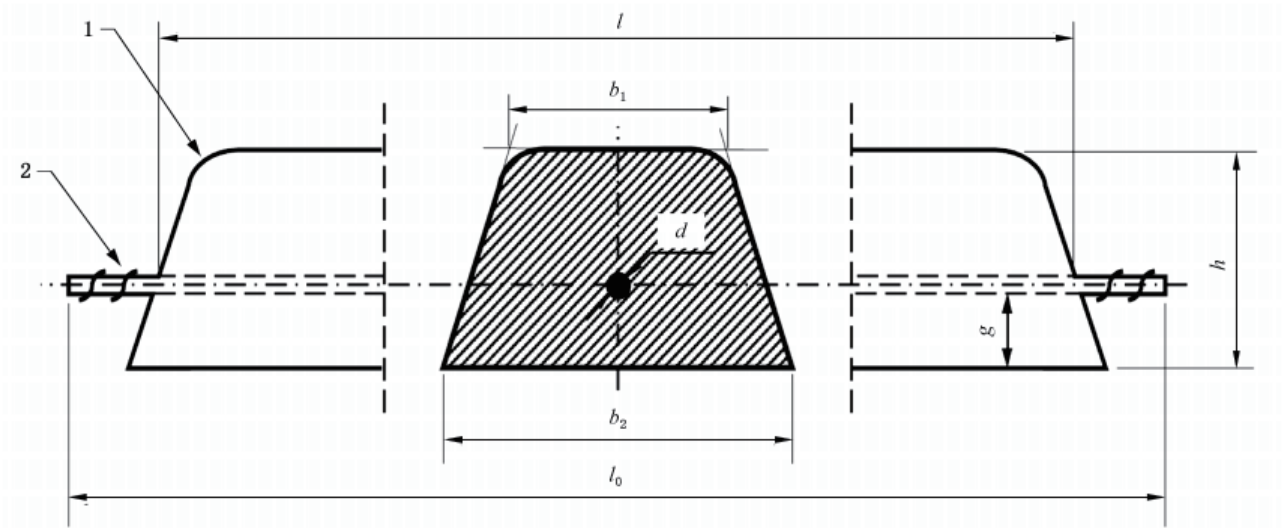
Electrochemical Property			
Executive Standard	**DNV RP B401**	**GB/T4948-2025:A21**	**BS EN12496-2013:A3**
Open Potential(-V,vs SCE)	/	1.10-1.18	/
Closed Potential(-V,vs SCE)	≥1.05	1.05-1.12	1.05-1.12
Actual Capacitance(A·h/kg)	≥2500	≥2600	≥2500
Current Efficiency(%)	/	≥90	/

PRODUCT GUIDE



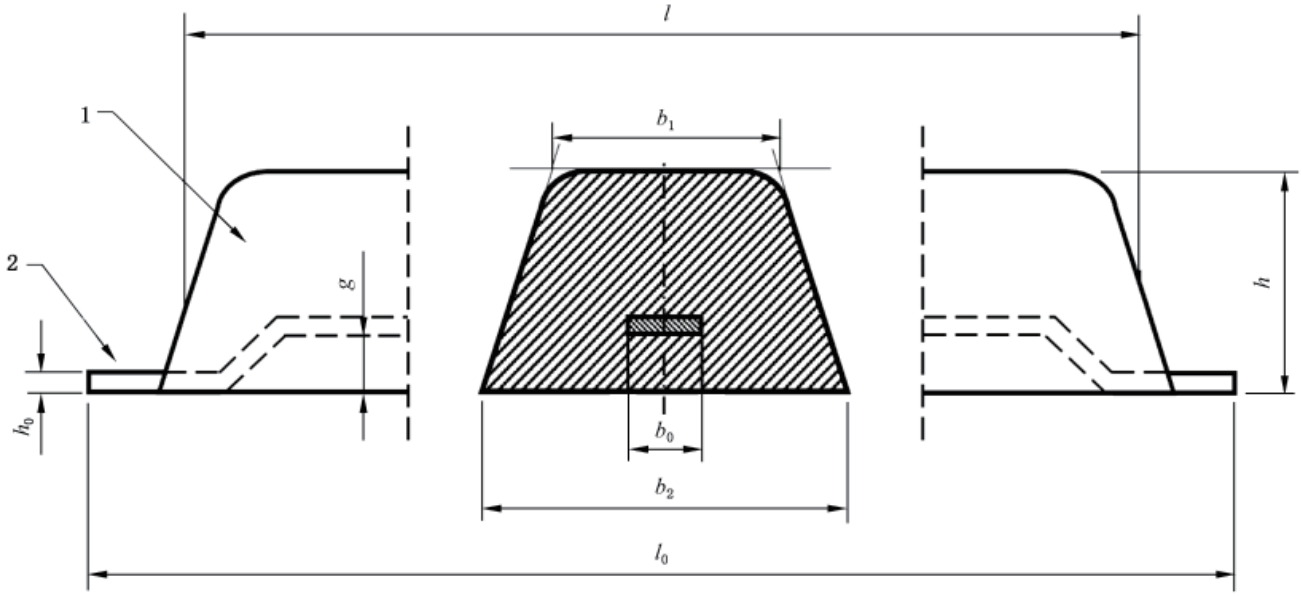
1--Anode body 2--Steel pipe with iron feet

Type	Anode body size/mm	Size of iron feet/mm					N.W. kg	G.W. kg
	$l \times (b_1 \times b_2) \times h$	l_0	d	d_3	g	h_1		
ID-01	2300×(220+240)×230	2500	60	48	115	300	311.0	336.5
ID-02	1600×(200+210)×220	1800	60	48	110	300	182.6	202.5
ID-03	1500×(170+200)×180	1700	50	38	90	300	127.0	142.2
ID-04	900×(150+170)×160	1100	40	28	80	300	59.1	67.2



1--Anode body 2--Threaded steel feet

Type	Anode body size/mm	Size of iron feet/mm			N.W. kg	G.W. kg
	$l \times (b_1 \times b_2) \times h$	l_0	d	g		
ID-05	1500×(148+178)×170	1800	25	65	114.0	121.0
ID-06	850×(180+220)×180	1100	25	75	80.0	84.5
ID-07	800×(200+280)×150	1050	25	55	76.0	80.0
ID-08	700×(160+220)×180	950	22	75	68.5	72.0
ID-09	1250×(115+135)×130	1500	18	50	52.0	55.0
ID-10	1000×(115+135)×130	1250	18	50	42.6	45.0
ID-11	750×(115+135)×130	1000	16	50	33.0	35.0
ID-12	500×(115+135)×130	750	16	50	22.0	23.0



1--Anode body 2--Flat steel feet

Type	Anode body size/mm	Size of iron feet/mm				N.W. kg	G.W. kg
	$l \times (b_1 \times b_2) \times h$	l_0	b_0	h_0	g		
ID-13	1500×(148+178)×170	1800	50	8	55	114.0	121.0
ID-14	850×(180+220)×180	1100	60	8	60	80.0	84.5
ID-15	800×(200+280)×150	1050	60	8	50	76.0	80.0
ID-16	700×(160+220)×180	950	60	8	60	68.5	72.0
ID-17	1250×(115+135)×130	1500	40	8	35	52.0	55.0
ID-18	1000×(115+135)×130	1250	40	8	35	42.6	45.0
ID-19	750×(115+135)×130	1000	40	8	35	33.0	35.0
ID-20	500×(115+135)×130	750	40	8	35	22.0	23.0